

In the Claims:

1. (Currently amended) A mechanism including comprising:
a piston-and-cylinder assembly including a piston housed in a cylinder;
a pin member passing through the piston and a guide member having a guide recess accommodating an end of the pin member;
the guide recess being so shaped and orientated in relation to the piston-and-cylinder assembly that a common axis exists between the guide recess and the piston-and-cylinder assembly, the guide member and the piston-and-cylinder assembly being so mounted as to be rotatable relative to each other about the common axis;
the guide recess including an inner periphery and an outer periphery, the inner and outer peripheries including respective mid-portions where the periphery is narrowest lying between two end lobe portions, for guiding the pin member continuously in a path which includes two end lobe portions separated by a narrower mid-portion;
rotation of the guide member and the piston-and-cylinder assembly relative to each other causing the piston to sweep up and down the cylinder; and
the radius of curvature along the narrowest part of the narrower mid-portion of the inner periphery of the guide recess being always larger than the radius of curvature along the end lobe portion of the outer periphery of the guide recess.

2. (Currently amended) A mechanism as claimed in claim 1 including comprising:
a piston-and-cylinder assembly including a second piston housed in a second cylinder;
a second pin member passing through the second piston; and
the guide member accommodating an end of the first pin member and an end of the second pin member in the guide recess.

Claims 3 to 5 (cancelled).

6. (Currently amended) A mechanism as claimed in ~~any one of claims 1 to 5~~ claim 1, wherein the ratio of the radius of curvature along the said end lobe portion of the outer periphery of the guide recess relative to the radius of curvature along the narrowest part of the

narrower mid-portion of the inner periphery of the guide recess lies in the range from about 0.95 to about 0.01, both limits included.

7. (Currently amended) A mechanism as claimed in ~~any one of claims 1 to 6 claim 6~~, wherein the ratio of the radius of curvature along the said end lobe portion of the outer periphery of the guide recess relative to the radius of curvature along the narrowest part of the narrower mid-portion of the inner periphery of the guide recess lies in the range from about 0.85 to about 0.15, both limits included.

8. (Currently amended) A mechanism as claimed in ~~any one of claims 1 to 7 claim 7~~, wherein the ratio of the radius of curvature along the said end lobe portion of the outer periphery of the guide recess relative to the radius of curvature along the narrowest part of the narrower mid-portion of the inner periphery of the guide recess lies in the range from about 0.75 to about 0.25, both limits included.

9. (Currently amended) A mechanism as claimed in ~~any one of claims 1 to 8 claim 8~~, wherein the ratio of the radius of curvature along the said end lobe portion of the outer periphery of the guide recess relative to the radius of curvature along the narrowest part of the narrower mid-portion of the inner periphery of the guide recess lies in the range from about 0.65 to about 0.35, both limits included.

10. (Currently amended) A mechanism as claimed in ~~any one of claims 1 to 9 claim 9~~, wherein the ratio of the radius of curvature along the said end lobe portion of the outer periphery of the guide recess relative to the radius of curvature along the narrowest part of the narrower mid-portion of the inner periphery of the guide recess lies in the range from about 0.55 to about 0.45, both limits included.

Claims 11 to 23 (cancelled)

24. (Currently amended) A mechanism as claimed in ~~any one of claims 1 to 23, including claim 1 comprising~~ bearing means at the end of the pin member or the ends of pin

members for effecting rolling contact between the peripheries of the guide recess and the end of the pin member or the ends of the pin members.

25. (Original) A mechanism as claimed in claim 24, wherein the bearing means at the end of the pin member or the ends of the pin members includes an outer bearing assembly contacting only the outer periphery of a guide recess and an inner bearing assembly contacting only the inner periphery of the guide recess.

26. (Original) A mechanism as claimed in claim 25, wherein the outer bearing assembly includes an outer cylindrical shell supported by a plurality of outer rollers on the pin member, the outer cylindrical shell lying in contact with the outer periphery only of the guide recess.

27. (Currently amended) A mechanism as claimed in ~~claim 26 or claim 26~~ claim 25, wherein the inner bearing assembly includes an inner cylindrical shell supported by a plurality of inner rollers on the pin member, the inner cylindrical shell lying in contact with the inner periphery only of the guide recess.

28. (Currently amended) A mechanism as claimed in ~~claim 26 or claim 27~~ claim 26, wherein the outer and inner bearing assemblies are so mounted that the outer and inner cylindrical shells rotate about the same axis.

29. (Currently amended) A mechanism as claimed in ~~any one of claims 26 to 28~~ claim 28, wherein the outer and inner bearing assemblies are so mounted that the outer and inner cylindrical shells rotate about the axis of the pin member.

30. (Currently amended) A mechanism as claimed in ~~claim 26 or claim 27~~ claim 26, wherein the outer and inner bearing assemblies are so mounted that the outer cylindrical shell rotates about an axis which is offset from the axis about which the inner cylindrical shell rotates.

Claim 31 (cancelled).

32. (Currently amended) A mechanism as claimed in ~~any one of claims 1 to 31 claim 1~~, including a guide recess having an inner periphery including a step in its profile for accommodating the bearing means at the end of the pin member or the ends of the pin members, the bearing means including an outer bearing assembly contacting only the outer periphery of a guide recess and an inner bearing assembly contacting only the inner periphery of the guide recess.

33. (Currently amended) A mechanism as claimed in ~~any one of claims 1 to 32 claim 1~~, including a guide recess having an outer periphery the surface of which is narrower than the surface of the inner periphery, the bearing means at the end of the pin member or the ends of the pin members including an outer bearing assembly contacting only the narrower surface of the outer periphery of the guide recess and an inner bearing assembly contacting only the surface of the inner periphery of the guide recess.

Claims 34 through 35 (cancelled)

36. (Original) A guide member, for a piston-and cylinder assembly, having a guide recess including an inner periphery and an outer periphery, the inner and outer peripheries including respective mid-portions where the periphery is narrowest lying between two end lobe portions, providing a continuous path which includes two end lobe portions separated by a narrower mid-portion, the radius of curvature along the narrowest part of the narrower mid-portion of the inner periphery of the guide recess being always larger than the radius of curvature along the end lobe portion of the outer periphery of the guide recess.

37. (Original) A guide member as claimed in claim 36, wherein the radius of curvature along the said end lobe portion of the outer periphery of the guide recess is of the order of a half of the radius of curvature along the narrowest part of the narrower mid-portion of the inner periphery of the guide recess.

38. (Original) A guide member as claimed in claim 36, wherein the radius of

curvature along the said end lobe portion of the outer periphery of the guide recess is of the order of two-thirds of the radius of curvature along the narrowest part of the narrower mid-portion of the inner periphery of the guide recess.

39. (Original) A guide member mechanism as claimed in claim 36, wherein the radius of curvature along the said end lobe portion of the outer periphery of the guide recess is of the order of between two-thirds and a half of the radius of curvature along the narrowest part of the narrower mid-portion of the inner periphery of the guide recess, both limits included.

Claims 40 to 45 (cancelled).